

**BY ORDER OF THE CHIEF,
NATIONAL GUARD BUREAU**



MANPOWER STANDARD 23D1A2

28 AUGUST 2003

Manpower Standard

ENVIRONMENTAL/ELECTRICAL

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This Air National Guard Manpower Standard (ANGMS) quantifies the manpower required to accomplish the tasks described in the process oriented description (POD) for varying levels of workload in the 189th Airlift Wing whose mission it is to provide aircrew training for students from each branch of the military that flies the C-130 aircraft and from 27 foreign countries. This standard applies to the 189th Airlift Wing, Little Rock Air Force Base, Arkansas, and encompasses all major processes performed within the Environmental/Electrical function. It does not apply to any other units. This standard is applicable to peacetime operations only. The Air National Guard (ANG) is authority for the approval and publication of ANG Manpower Standards. Air Force (AF) and ANG directives contain policy and procedural guidance for the operation of Environmental/Electrical. This standard was developed in accordance with AF Instruction (AFI) 38-201, *Determining Manpower Requirements*, and AF Manual (AFMAN) 38-208, Volume 1, *Air Force Management Engineering Program (MEP) Processes*, and AFMAN 38-208, Volume 2, *Air Force Management Engineering Program (MEP) - Quantification Tools*. Send comments and suggested improvements on AF IMT 847, *Recommendation for Change of Publication*, through channels, to ANG, Management Engineering Branch (ANG/XPME/Operating Location TN [OLTN]), 106 Briscoe Drive, McGhee Tyson Air National Guard Base, TN 37777-6283.

1. STANDARD DATA.

1.1. Approval Date: 28 August 2003.

1.2. Man-hour Data Sources: The Operational Audit (historical record and technical estimate) technique was used to collect/determine man-hour/manpower data.

1.3. Standard Manpower Equation: $Y = 120.2 + 76.62X$.

1.4. Workload Factor.

1.4.1. Title: X= Primary Aircraft Inventory (PAI)

1.4.2. Definition: Number of PAI authorized to support the unit training mission.

1.4.3. Source: USAF Programming Document (PD), Volume 2, maintained by NGB/FM.

1.4.4. Points of Contact.

1.4.4.1. Functional: Col John J Samuhel, 189 MX/CC

1.4.4.2. Manpower: George W. Tatum III, ANG/XPME/OLTN

2. Application Instructions.

2.1. Equation. Apply the equation in Paragraph 1.3., to determine the required man-hours.

2.2. Man-Hour Availability Factor (MAF). Divide the resulting man-hours by the appropriate MAF/overload factor. The answer, rounded up, will quantify the required manpower.

2.3. Upper and Lower Extrapolation Limits:

2.3.1. $Y_U = 916.401$.

2.3.2. $Y_L = 549.841$.

3. STATEMENT OF CONDITIONS. The normal hours of operation for this function are 80 hours per two-week period. The alternate work schedule of eight nine hour days, and one eight hour day is the norm. No environmental, equipment, or facility conditions affect this Manpower Standard.

DANIEL JAMES III, Lieutenant General, USAF
Director, Air National Guard

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFI 38-201 *Determining Manpower Requirements*

AFMAN 38-208, Volume 1, *Air Force Management Engineering Program (MEP)-Process*

AFMAN 38-208, Volume 2, *Air Force Management Engineering Program (MEP)-Quantification Tools*

AFMS 00AA, *Standard Indirect Description*

Abbreviations and Acronyms

AF - Air Force

AFMS - Air Force Manpower Standard

AFSC - Air Force Specialty Code

ANG - Air National Guard

ANGMS - Air National Guard Manpower Standard

MAF - Man-Hour Availability Factor

MEP - Management Engineering Program

PAI - Primary Aircraft Authorized

PD - Programming Document

POD - Process Oriented Description

TCTO - Time Compliance Technical Order

UMD - Unit Manpower Document

UTA - Unit Training Assembly

Terms

Air National Guard Manpower Standard (ANGMS). A numbered, specialized publication that quantifies manpower requirements for a work center, it also includes approved variances. See AFI 38-201.

Man-Hour. A unit of measuring work. It is equivalent to one person working at a normal pace for 60 minutes, two people working at a normal pace for 30 minutes, or similar combination of people working at a normal pace for a period of time equal to 60 minutes.

Manpower Standard. The basic tool used to determine the minimum level of manpower required to support a function. It is a quantitative expression that represents a work center's man-hour requirements in response to varying levels of workload.

Process Oriented Description. A format that shows work center responsibilities structured for easy measurement of work categories, tasks and subtasks.

Attachment 2

PROCESS ORIENTED DESCRIPTION
ENVIRONMENTAL/ELECTRICAL

Table A2.1. Listing of Functional Processes.

1.	ON-EQUIPMENT MAINTENANCE:
1.1.	MAINTAINS ELECTRICAL/ENVIRONMENTAL SYSTEM:
1.1.1.	MAINTAINS AIRFRAME.
1.1.2.	MAINTAINS COCKPIT AND FUSELAGE COMPARTMENT.
1.1.3.	MAINTAINS LANDING GEAR.
1.1.4.	MAINTAINS FLIGHT CONTROL.
1.1.5.	MAINTAINS TURBO PROPELLER POWER PLANT.
1.1.6.	MAINTAINS AUXILIARY POWER PLANT.
1.1.7.	MAINTAINS HYDRAULIC PROPELLER.
1.1.8.	MAINTAINS AIR CONDITIONING, PRESSURIZATION, AND SURFACE ICE CONTROL.
1.1.9.	MAINTAINS POWER SUPPLY.
1.1.10.	MAINTAINS LIGHTING SYSTEM.
1.1.11.	MAINTAINS HYDRAULIC AND PNEUMATIC POWER SUPPLY.
1.1.12.	MAINTAINS FUELS SYSTEM.
1.1.13.	MAINTAINS OXYGEN SYSTEM.
1.1.14.	MAINTAINS MISCELLANEOUS UTILITIES.
1.1.15.	MAINTAINS INSTRUMENT.
1.1.16.	MAINTAINS WINDSHIELD/WINDSHIELD WIPER.
1.1.17.	MAINTAINS UHF COMMUNICATION.
1.1.18.	MAINTAINS AIR BURBINE MOTOR SYSTEM.

1.2.	PERFORMS INSPECTION:
1.2.1.	PERFORMS SPECIAL INSPECTION.
1.2.2.	PERFORMS HOMESTATION CHECK.
1.2.3.	PERFORMS ACCEPTANCE INSPECTION.
1.2.4.	PERFORMS ISOCHRONAL INSPECTION:
1.2.4.1.	PERFORMS MAJOR ISOCHRONAL INSPECTION.
1.2.4.2.	PERFORMS FIRST MINOR INSPECTION.
1.2.4.3.	PERFORMS SECOND MINOR INSPECTION.
1.2.4.4.	PERFORMS THIRD MINOR INSPECTION.
2.	PERFORMS OFF-EQUIPMENT MAINTENANCE.
3.	PERFORMS PERIODIC MAINTENANCE OF ELECTRICAL EQUIPMENT IN BASE SUPPLY.
4.	PERFORMS NONPOWERED AEROSPACE GROUND EQUIPMENT MAINTENANCE.
5.	PERFORMS SHOP SUPPORT GENERAL CODE.
6.	PERFORMS GROUND HANDLING, SERVICING, AND RELATED TASK.
7.	PROVIDES ASSISTANCE.
8.	ENSURES TIME COMPLIANCE TECHNICAL ORDER (TCTO) COMPLIANCE.
9.	PERFORMS BENCH STOCK MAINTENANCE.
10.	PERFORMS FOREIGN OBJECT DAMAGE WALK/INSPECTION.
11.	ATTENDS AIRCREW DEBRIEFING.
12.	ENSURES AIRCRAFT DOCUMENTATION.
13.	PERFORMS TECHNICAL DATA SUB ACCOUNT MAINTENANCE.
14.	MONITORS HAZARDOUS WASTE MANAGEMENT:
14.1.	PROCESSES HAZARDOUS WASTE.

14.2.	MAINTAINS ACCUMULATION POINT.
14.3.	MAINTAINS PROTECTIVE EQUIPMENT.
15.	PERFORMS SPECIAL PLANNING OR SCHEDULING:
15.1.	PREPARES FOR UNIT TRAINING ASSEMBLY.
15.2.	PREPARES FOR MOBILITY/DEPLOYMENT.
15.3.	PREPARES FOR AND/OR PERFORMS SPECIAL PROGRAMS.
16.	PERFORMS TRAVEL ASSOCIATED WITH TEMPORARY DUTY.
17.	INDIRECT. Indirect work involves those tasks that are not readily identifiable with the work center's specific product or service. The major categories of standard indirect work are: Administers Civilian, Officer, and Enlisted Personnel; Directs Work Center Activity; Provides Administrative Support; Prepares for and Conducts/Attends Meeting; Administers Training; Manages Supplies; Maintains Equipment; and Performs Cleanup.

Attachment 3**MANPOWER TABLE****A3.1. Standard Manpower Table**

Air Force Specialty Title	AFSC	Grade	Manpower Requirement			
Acft Elect and Envir Sys Supvr	2A6XX	Civ	1	1	1	1
Acft Elect and Envir Mech	2A6XX	Civ	2	3	4	5
Total			3	4	5	6

NOTE. AFSCs may be adjusted at the discretion of the Commander.